

2.1 INTRODUCTION

Norfolk Southern Railway Company (Norfolk Southern) provides rail freight service across New York State via its Southern Tier route. The Southern Tier route is a critical freight rail link between Buffalo and Binghamton, New York, and provides connections to Canada and the eastern seaboard of the United States. In addition to serving as a critical rail freight link for Norfolk Southern, the Southern Tier route is used by Canadian Pacific Railway and provides interchange connections to 11 short line railroads. It also serves communities in western and southern New York State and northern and eastern Pennsylvania. **Figure 2-1** illustrates the location of the Southern Tier route in New York State and **Figure 2-2** illustrates the routes for freight rail using the Southern Tier route.

The Southern Tier route passes through Letchworth State Park in western New York, on right-of-way owned by Norfolk Southern but within the boundaries of the park. This right-of-way within the park boundaries includes the Portageville Bridge, which provides the crossing over the Genesee River between Wyoming and Livingston Counties. The bridge, which opened to rail traffic in 1875 (replacing an earlier bridge that opened to rail traffic in 1852), has reached the end of its useful life as a freight rail structure and must now be upgraded or replaced. **Figure 2-3** shows the location of the Portageville Bridge.

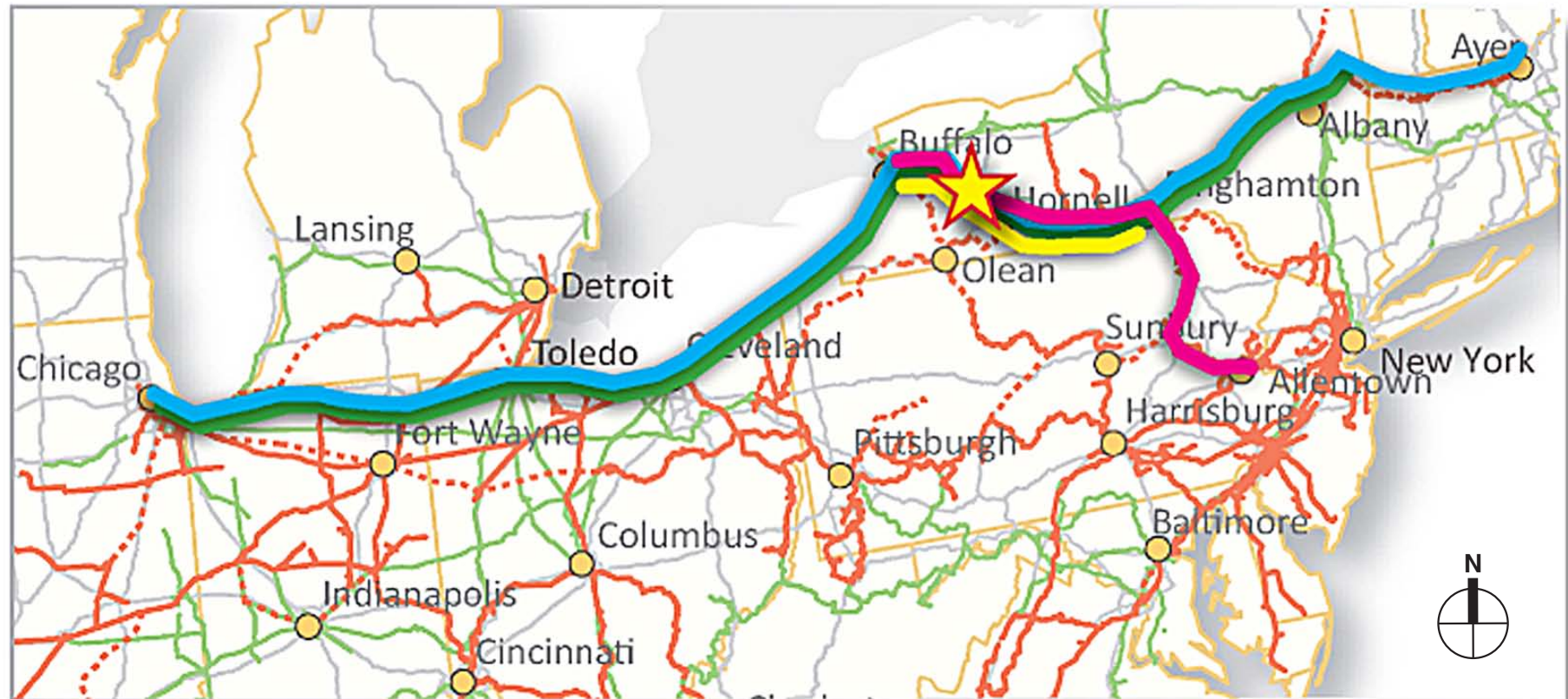
The Portageville Bridge is a vital, yet currently deficient, component of the Southern Tier route. The bridge is a single track, truss structure that spans approximately 819 feet across and 245 feet above the Genesee River gorge. It is at the end of its useful life as a freight rail structure, and as such, Norfolk Southern must substantially restrict the speed and tonnage of trains that cross the Genesee River. Without action to upgrade or replace the bridge, the crossing may need to be taken out of service. This would greatly impair Norfolk Southern's ability to operate on a substantial portion of the Southern Tier route and would negatively impact the economies of the many locations it serves.

This chapter addresses the history and existing context of the Project site, including the existing conditions, deficiencies, and need for enhancement or replacement of the Portageville Bridge.

2.2 PROJECT HISTORY

The Portageville Bridge was constructed by the Erie Railway Company in 1875. The bridge and the Southern Tier route became part of Conrail's national freight network on April 1, 1976; Norfolk Southern began operating, pursuant to operating and lease agreements, the entire Southern Tier route, including the Portageville Bridge, on June 1, 1999. On August 27, 2004, Norfolk Southern acquired the route through merger. Throughout its tenure as operator, Norfolk Southern has undertaken numerous capital improvements to the Southern Tier route's infrastructure. Other individual improvements completed along the Southern Tier route include the replacement of three freight rail bridges, each of which has independent utility and is now capable of carrying the industry standard of 286,000 pound gross unit weight traffic, providing benefits to their individual locations while contributing to overall improved service along the route. The Project complements Norfolk Southern's initiatives to remove the various operational



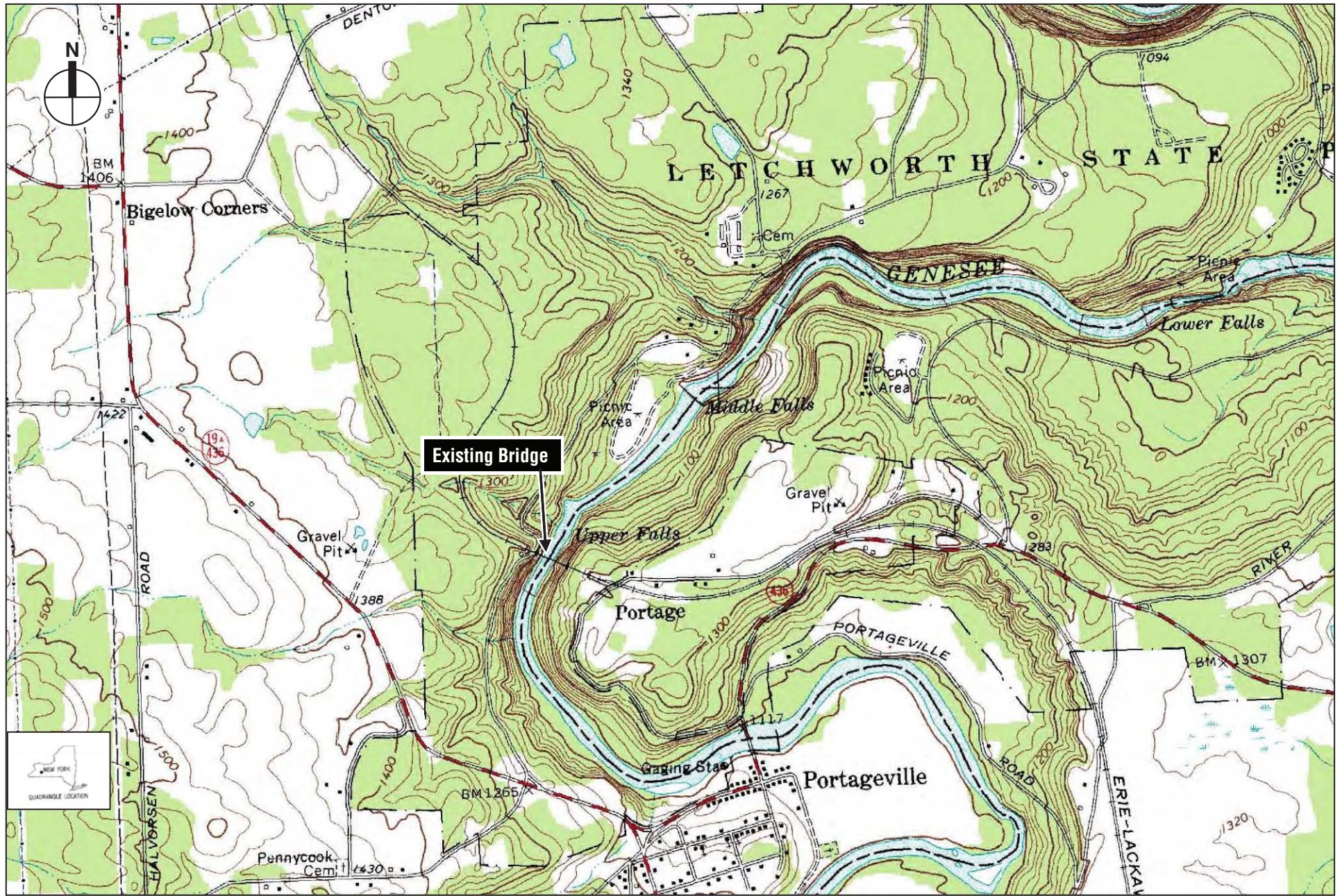


Legend

—	38T – 39T Merchandise	210 miles
—	205-206 Double Stack Intermodal	899 miles
—	12T – 13T Merchandise	376 miles
—	22K – 23K Intermodal	1031 miles



Portageville Bridge



0 1000 2000 FEET

SCALE

Source: USGS Topographic Map - Portageville, NY Quadrangle
78°2'58"W, 42°34'40"N

PORTAGEVILLE BRIDGE

Location of Portageville Bridge
Figure 2-3

constraints on the Southern Tier route to achieve safe and efficient operations on a local and regional level.

The New York State Department of Transportation (NYSDOT), acting as lead agency pursuant to the New York State Environmental Quality Review Act (SEQRA), commenced environmental review of the Project in accordance with SEQRA in 2008. In September 2008, NYSDOT published a positive declaration and notice of scoping in the New York Environmental Notice Bulletin. NYSDOT conducted a public scoping meeting on October 1, 2008. In addition, NYSDOT and Norfolk Southern invited representatives of federal and state agencies that might have an interest in the Project and potentially impacted municipalities and the public to attend the scoping meeting. These stakeholders were also invited to provide comment on the Project scope, including the potential Project alternatives, either in person at the scoping meeting and/or by submitting written comments on the Draft Scoping Document. NYSDOT and Norfolk Southern considered the comments received and provided responses in a Final Scoping Report, which was issued in March 2009.

NYSDOT prepared a Draft Environmental Impact Statement (DEIS) pursuant to SEQRA. The SEQRA DEIS was made available for public review in November 2012, and a public hearing was held in January 2013. The public comment period on the SEQRA DEIS closed on February 1, 2013, and NYSDOT began to prepare a Final Environmental Impact Statement (FEIS) for the Project.

In July 2013, it was determined that federal Congestion Mitigation and Air Quality improvement program (CMAQ) funds could be made available to support construction of the Project. As a federal funding program, the allocation of CMAQ funds requires involvement of a federal transportation agency and therefore also requires review under federal environmental review procedures. The Federal Highway Administration (FHWA) has assumed the role of federal lead agency for the environmental review of the Project pursuant to the National Environmental Policy Act of 1969 (NEPA).

FHWA initiated its NEPA review with publication of a Notice of Intent (NOI) in the *Federal Register* on October 31, 2013. The NOI began the NEPA scoping phase of the Project. During NEPA scoping, FHWA and NYSDOT advised federal and state agencies of the status of the Project and their roles as federal and state lead agencies. FHWA also invited agencies with regulatory approval responsibilities and/or particular expertise on the potential environmental effects of the Project to serve as Cooperating Agencies for the NEPA review. FHWA and NYSDOT held the first Cooperating Agency meeting on November 18, 2013, and they continue to engage in conference calls and correspondence with Cooperating Agencies to keep them informed of the Project's progress. FHWA and NYSDOT also invited agencies with an interest in the Project to serve as Participating Agencies in the NEPA review.

A NEPA public scoping meeting was held on November 19, 2013 in Mount Morris, New York. The public was invited to provide oral or written comments at the scoping meeting. The public could also provide comments by letter or email throughout the scoping comment period, which extended through December 19, 2013. Nine comment letters were received. The comments are summarized in the Final Scoping Report, and substantive comments are also addressed in this NEPA DEIS.

Since the Project has not changed substantially (but has been refined based on previous public and agency comments), this NEPA DEIS incorporates the analyses from the SEQRA DEIS as appropriate. In addition, public and agency comments received during the review of the SEQRA DEIS will be considered during the NEPA process, as appropriate. The NEPA DEIS also incorporates additional analyses as required by the NEPA process and to comply with other federal procedures. The primary Project refinement presented in this DEIS is that through the previous SEQRA and public review process, Alternative 5—New Bridge on Parallel

Alignment/Convey Existing Bridge—has been eliminated from further study in this DEIS (see Chapter 3, “Project Alternatives,” for further discussion).

2.3 TRANSPORTATION PLANS AND LAND USE

2.3.1 Local Plans for the Project Area

The Portageville Bridge is located in Wyoming and Livingston Counties in western New York. The railroad-owned right-of-way passes through Letchworth State Park, a larger than 14,000-acre park that extends some 17 miles along the east and west banks of the Genesee River. Letchworth State Park is notable for the gorge formed by and waterfalls along the Genesee River that are contained within its boundaries. The lands surrounding the park are largely rural farms and residences. The Southern Tier route (including the Portageville Bridge), which predates the establishment of this area as a state park, passes through the southern portion of Letchworth State Park near its Portageville entrance.

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and the planning departments in Wyoming County and Livingston County have not identified any public or private development plans for the area of Letchworth State Park and the adjacent land through which the Southern Tier route passes. However, the ongoing New York State’s Heritage Trail Program will continue to develop a network of public trails in western New York. The Program incorporates an existing segment of the Genesee Valley Greenway Trail that runs through Letchworth State Park and passes beneath the Portageville Bridge.

2.3.2 Transportation Corridor

Importance of the Project Route Segment

The Southern Tier route is one of four Class I railroad routes in New York State and is the primary freight rail route between Buffalo and Binghamton. Class I railroads are railroad companies with annual operating revenues of more than \$433.2 million in 2011.¹ The routes used by Class I railroads represent the primary corridors in the nation’s freight rail network, and the Southern Tier route is a critical link in domestic and international goods movement. The Portageville Bridge is the Southern Tier’s crossing of the Genesee River between Wyoming and Livingston Counties and is critical to the operation of this freight corridor (see **Figure 2-1**).

Alternative Routes

The Southern Tier route is Norfolk Southern’s only east–west rail route through New York State. Unlike trucking firms that use vehicular roadways, rail carriers must seek permission to operate over routes owned by other carriers. The Empire Corridor to the north and other rail routes through western New York provide freight service to and from the Buffalo area to points east and south, but they are owned and operated by other carriers and do not serve the same destinations as the Southern Tier route. Norfolk Southern would only be able to operate on these alternative routes with the permission of their respective owners, which are competitors of Norfolk Southern, and would have to comply with any scheduling restrictions they impose. In September 2009, diversions to alternative routes were required when the Portageville Bridge was taken out of service for emergency repairs. The three-day shut down caused five-hour

¹ The Surface Transportation Board defines railroads according to their annual operating revenues, adjusted for inflation. Class I railroads are those with adjusted operating revenues for three consecutive years of \$250 million or more (1991 dollars).

delays in Norfolk Southern freight schedules and resulted in substantial operational deficiencies that negatively impacted industries and consumers served by this route.

Corridor Deficiencies and Needs

The Portageville Bridge is more than 100 years old and is incapable of meeting the weight and speed standards of modern freight rail operations. The bridge's condition will not accommodate the weight of modern, industry-standard freight cars, and as such, Norfolk Southern operates trains at slower speeds (10 miles per hour/10 MPH) than elsewhere on the Southern Tier route. To effectively and efficiently serve its customers, Norfolk Southern seeks to operate industry-standard 286,000 pound car loads at speeds of 35 MPH on the Portageville Bridge. The Portageville Bridge is the only component of the Southern Tier route that does not meet these industry standards for weight and speed.

Transportation Plans: The Portageville Bridge Bottleneck

The *New York State Rail Plan* (NYSDOT, 2009) identifies the Portageville Bridge as 1 of 10 bottlenecks in New York State's Class I rail network. The plan cites the Portageville Bridge as limiting the load carrying capacity and operating speed of the Southern Tier route. The report states, "The weight restrictions and low operating speeds significantly impact the line's overall capacity. Any long-term closing of the Portageville Bridge would threaten the vitality of the entire route between Buffalo and Binghamton."² The rail plan identifies that New York State's Class I freight rail network is critical to the state's long-term economic vitality.

Future Plans

Norfolk Southern has implemented repairs and/or improvements to bring the Southern Tier route to a state of good repair to support modern freight rail operations. These improvements included the replacement of three independent freight rail bridges along the corridor that provide distinct, localized benefits while contributing to improved overall performance on the route. In addition, as required by the Rail Safety Improvement Act of 2008, Norfolk Southern will be implementing Positive Train Control on the Southern Tier route.

2.4 TRANSPORTATION CONDITIONS, DEFICIENCIES, AND ENGINEERING CONSIDERATIONS

The Southern Tier route is Norfolk Southern's mainline between Buffalo and Binghamton, New York with through connections to Canada and the Eastern Seaboard of the United States. Due to the structural limitations of the Portageville Bridge, Norfolk Southern is constrained in its operation of the Southern Tier route. Norfolk Southern must complete the Project to ensure that the Genesee River crossing at Portage can meet modern freight rail capacity and weight standards.

2.4.1 Operations and Maintenance

Functional Classification

The Southern Tier route is a main line connecting Binghamton, New York and points east with Buffalo, New York and points west. As noted above, the Southern Tier route is a critical link in domestic and international goods movement and is used for Class I railroad operations. Norfolk

² New York State Department of Transportation, *New York State Rail Plan*, 2009, page 44.

Southern is the owner of the Southern Tier route, including the Portageville Bridge; in addition, Canadian Pacific maintains haulage rights over the bridge and uses the Southern Tier route to move traffic between the western areas of New York and Pennsylvania and other points on its network. The ability for freight railroads, particularly Class I railroads, to carry 286,000 pounds per rail car is paramount, as this weight is the current industry standard and the overwhelming majority of the national rail network handles the heavier cars. Therefore, the bridge now operates as a bottleneck in the heart of a major east-west transportation corridor. Heavier freight traffic has to be routed entirely around the Southern Tier, which results in longer transit times, more fuel consumed, reduced energy efficiency, and higher transportation cost to customers.

Right-of-Way and Control of Access

The railroad right-of-way within the Project limits was acquired by the Attica and Hornellsville Railroad, a subsidiary of the Erie Railroad, ca. 1850. Norfolk Southern is the current owner of the right-of-way.

Public access to the railroad right-of-way is prohibited, with the exception of any public grade crossings, private grade crossings established either by deed or by agreement between the railroad and adjacent land-owner, or farm crossings established pursuant to New York State Railroad Law § 52.

However, within the boundaries of Letchworth State Park, the railroad right-of-way encompasses several park features. On the west side of the Genesee River, these include a grade-separated crossing with Park Road as well as adjacent segments of Park Road, approximately half of a small parking lot (the Highbridge Parking Area), and the southern trailheads of two trails, the Mary Jemison Trail and the Gorge Trail. On the east side of the river, the right-of-way encompasses a portion of the Genesee Valley Greenway Trail. These features are minor encroachments on the right-of-way and do not interfere with railroad operations.

Speeds

The Southern Tier route is maintained by Norfolk Southern in accordance with the Federal Railroad Administration's (FRA) Track Safety Standards (49 CFR Part 213) at FRA Class 4. For mainline freight railroads, FRA typically designates Class 4 speed restrictions, which permit freight operations at up to 60 MPH. At the Portageville Bridge, track geometry would permit optimal speeds of 35 MPH; however, the bridge's structure necessitates a far slower speed. Trains operate at low speed, 10 MPH, across the Portageville Bridge, because of current structural limitations. For trains in excess of a mile long, which is not uncommon, especially for those traveling long distances—including international trains originating from Canada or the Midwest—the speed restriction impacts transit times and causes congestion on the Southern Tier and other Norfolk Southern corridors.

Traffic Volumes

Presently, 12 to 14 freight trains operate across the Portageville Bridge each day, and the same number of trains would be expected to cross the bridge with completion of the Project. However, in the future, Norfolk Southern anticipates an eventual increase in its freight traffic on the Southern Tier route, as a result of implementation of a number of independent projects being undertaken by Norfolk Southern and by others. Once these other projects and activities are completed, traffic across the Portageville Bridge may increase from the current level of 12 to 14 trains per day to a future level of approximately 17 trains per day over the long-term (10 years in the future or beyond).

Safety Considerations, Accident History and Analysis

Due to the condition of the Portageville Bridge, Norfolk Southern has implemented enhanced maintenance and inspection measures. After an inspection of the bridge in September 2009 identified broken rivets and structural cracks, engineers deemed it unsafe to continue operations and closed the bridge for three days while emergency repairs were made. All local and through traffic normally routed over the Southern Tier was temporarily detoured onto other railroads. This disruption had the immediate effect of leading to train service delays.

In addition, the Portageville Bridge poses safety concerns related to the risk of trespassing by pedestrians, including park visitors, despite efforts by Norfolk Southern to prohibit trespassing through preventive measures such as fencing and signage. No accidents have occurred on the Portageville Bridge while it has been under Norfolk Southern's ownership but the risk of trespassing remains an ongoing concern.

Security

Security measures at the bridge consist of warning signs and fencing located at either end of the bridge to alert against trespassing.

Police, Fire Protection, and Ambulance Access

There is no vehicular access across the Portageville Bridge. Emergency vehicles use area roadways including Portageville Road and the park road.

Ownership and Maintenance Jurisdiction

Norfolk Southern is responsible for the operation and maintenance of the Portageville Bridge, which lies at milepost 361.66 of the Southern Tier route.

2.4.2 Multimodal

Pedestrians

The railroad right-of-way is private property, and trespassing is prohibited. However, pedestrians, including park visitors, trespass on the bridge apparently in an effort to view the gorge from the bridge's vantage point.

Bicycles

The railroad right-of-way is private property and bicycles are prohibited.

Transit

There is no commuter rail or intercity passenger rail service on the Southern Tier route between Port Jervis and Buffalo.

Airports and Ports

At present, Norfolk Southern does not provide special service to airports or seaports via the Southern Tier route.

Access to Recreation Areas (Parks, Trails, Waterways, State Lands)

The Southern Tier route does not provide any public access to parks, trails, waterways, or State lands. However, the railroad right-of-way within the Project limits is surrounded by Letchworth

State Park. Two trails and the main park road pass directly beneath the Portageville Bridge (through Norfolk Southern's right-of-way), and a third trail is located in close proximity to the western approach to the bridge, with its trailhead on Norfolk Southern's right-of-way. Also near the western end of the bridge, a small parking area provides access to the beginning of two of these trails. Approximately half of the parking area is located on Norfolk Southern's right-of-way.

2.4.3 Infrastructure

Existing Railway Section

Within the Project limits, the Southern Tier route consists of a single main line track. The track is conventional wood-tie construction with 131-pound continuous welded rail and crushed stone ballast. The ballast section is open and free-draining.

Within the Project limits, the Southern Tier route has a maximum curvature of 7.0 degrees and a maximum grade of 0.66 percent.

Existing Features Not Meeting Current Design Standards

Many elements of the structure are loaded beyond their fatigue limit, requiring extensive work to improve the load rating. Based on the results of a fatigue analysis, all of the bottom chord members and diagonal members of the bridge structure, except for two in the center panel of each deck truss, show levels of fatigue beyond acceptable range. In a 2008 inspection report, cracks, missing rivets, and extensive corrosion were noted throughout the bridge, and structural gaps between the lateral columns and pier foundations were observed. These findings demonstrate the substantial degradation of the Portageville Bridge and confirm that it is at the end of its useful life as a rail freight-carrying structure, but are not unexpected given its more than 100 years of continuous operation.

Track Conditions

The track is maintained by Norfolk Southern in accordance with FRA's Track Safety Standards (49 CFR Part 213) at FRA Class 4.

Railroad Signal and Communications Systems

Norfolk Southern uses a radio communication system along this segment of the Southern Tier route and employs controlled sidings to allow for two-way traffic operations across the one track Portageville Bridge. There is no electronic signaling equipment within the Project limits.

Interlockings

There are no interlockings³ within the Project limits. The nearest interlockings are Control Point (CP) "Ross," located approximately 10 miles east of the Project at approximately milepost 352 and CP "Silver Springs," located approximately 6.5 miles west of the Project at approximately milepost 368.

Highway Crossings

There is one public roadway crossing and one private roadway crossing within the Project limits as follows:

³ An interlocking is a segment of railroad with interconnected signals and switches that allow trains to pass through without conflict with other routes.

- Portageville Road (USDOT # 264613H) is located east of the Portageville Bridge at milepost 361.49. Public ownership of Portageville Road ends at the northern property line of Norfolk Southern's right-of-way. It is an at-grade private crossing consisting of asphalt roadway approaches and a timber crossing surface that allows access between Portageville Road and the private property on the south side of the railroad tracks. Sight distance is 500 feet to the east and 1,200 feet to the west.
- Park Road (USDOT # 264614P) crosses the Southern Tier route below the Portageville Bridge at milepost 361.78. There is no restriction to the roadway width at the crossing and the bridge provides 22 feet clearance over the roadway. This crossing is not a public crossing for purposes of New York State Railroad Law.

Drainage System

The Project area's stormwater control measures consist of ditches along the railroad right-of-way leading to the bridge. By design, precipitation infiltrates through the railroad ballast and into the underlying soil in order to maintain the integrity of the roadbed and avoid wash-outs. There are no drainage controls on the existing Portageville Bridge, which has an open truss deck through which stormwater runoff discharges directly to the Genesee River.

Adjacent to the existing bridge approach on the west side of the river, a storm grate drains a small parking area. The storm grate collects water into a concrete-lined drainage basin that conveys water into the park drainage system.

Geotechnical

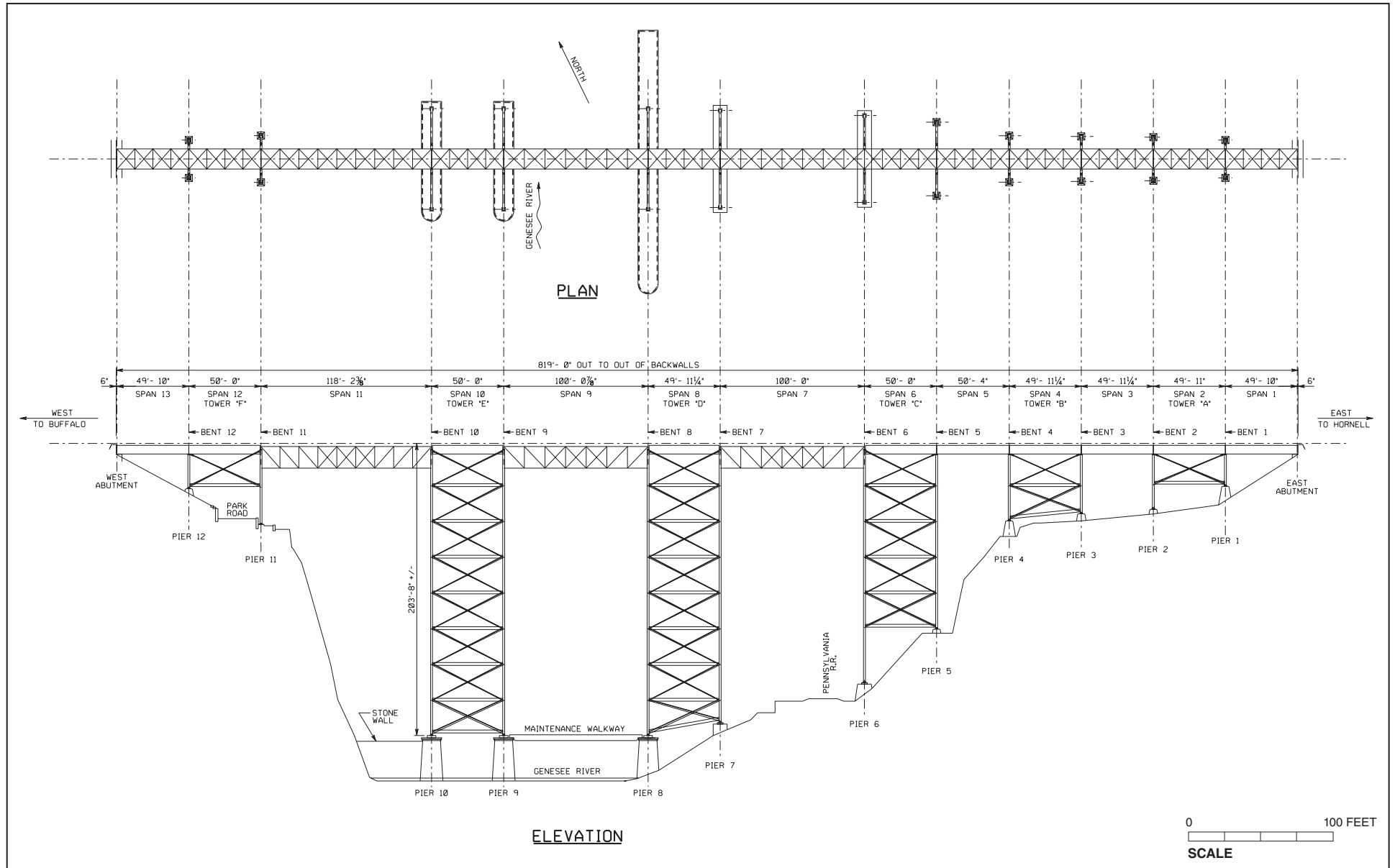
The Portageville Bridge spans the Genesee River gorge. In general, geologic conditions at the Project site consist of overburden soils overlying sedimentary bedrock. Overburden soils generally consist of lacustrine sand, silt, and clay and glacial drift deposits. The underlying bedrock consists of fine-grained silty sandstones with interbedded shale layers of the Nunda Formation.

In preparation for the Project, geotechnical engineers inspected the face of the gorge wall within the Project site in 2011. The goal of this investigation was to characterize the conditions along the proposed railway alignment, including the rock quality where the Project's arch bridge foundations would be located. During the investigation, inclined and vertical borings were drilled into the rock on the east and west sides of the gorge. Information collected during the geotechnical investigation indicates that overburden in the area of the proposed alignment generally consists of topsoil and fill underlain by natural deposits of silt, sand and gravel (stratum 2), clay (stratum 3), weathered bedrock (stratum 4), and underlying bedrock. The rock quality and compressive strength of the underlying sandstone varied, and generally increased with depth. The geotechnical engineering report is provided in **Appendix E** to this DEIS.

Structure

The Portageville Bridge is an 819-foot-long steel viaduct carrying a single railroad track, approximately 245 feet above the floor of the Genesee River gorge. The viaduct spans the gorge on six wrought iron towers that were constructed in 1875. The existing superstructure of the viaduct, which was largely constructed in 1903, consists of three spans of pin-connected deck trusses and ten spans of deck plate girders. **Figure 2-4** provides a plan and elevation of the existing bridge.

To maintain safe freight rail operations, the Portageville Bridge is frequently inspected, supplemented by continuous electronic monitoring, as well as ongoing repairs. Since 1999, Norfolk Southern has spent over \$850,000 to maintain the bridge. As an aged, high-level bridge,



the Portageville Bridge is difficult and dangerous to inspect, maintain, and repair. Furthermore, the inspections and repairs required to maintain the bridge may be difficult to implement without compromising operations. In 2009, Norfolk Southern closed the bridge for a three-day period to undertake emergency repairs. Subsequently, Norfolk Southern conducts weekly inspections of the bridge and has installed 24-hour vibration and stress monitors. Such measures are not currently undertaken elsewhere on Norfolk Southern's system.

Modern, mainline freight rail operations call for a load-carrying capacity of 286,000-pound freight cars. To meet this standard, bridges are designed for Cooper E80 live load. The live load refers to individual and cumulative ability of bridge members (i.e., truss members, tower members, etc.) to support the weight of the moving vehicles that use it. A load rating analysis of the Portageville Bridge determined its overall strength rating to be Cooper E29, or 64 percent less live load capacity than a Cooper E80 rated bridge. Thus, to safely use the bridge, Norfolk Southern operates at speeds and weight limits below Cooper E80 capacity.

FRA has nine classifications for the maximum allowable speed for freight and passenger rail operations. For mainline freight railroads, FRA typically designates Class 4 speed restrictions, which permit freight operations at up to 60 MPH. Due to the load rating of the Portageville Bridge and the restrictions resulting from the curvature of its approach tracks, Norfolk Southern has limited the speed of trains operating over the Portageville Bridge to 10 MPH, which is 50 MPH less than the FRA speed classification for the Southern Tier route and 25 MPH less than it could operate if the bridge met current standards.

Hydraulics of Bridges and Culverts

The Portageville Bridge is located outside of the Federal Emergency Management Agency (FEMA) 100-year floodplain, and the portion of the Genesee River that it spans is not a regulated floodway. Due to the steep banks of the Genesee River gorge, there is no floodplain present in the Project area. The closest floodplain is approximately 0.25 miles south of the Project site.

Utilities

There are no known active utilities within the Project limits. There is an abandoned transformer within the existing right-of-way.

2.4.4 Environmental Setting

The bridge and its approach tracks were constructed prior to the Letchworth State Park's creation in 1906. Rail operations along this corridor have been continuous since before the opening of Letchworth State Park.

The Portageville Bridge spans the Genesee River. The Genesee River bisects Letchworth State Park flowing from south to north. The river forms a gorge approximately 17 miles long and has three major waterfalls on its course through the park. Due to its natural beauty, the length of the river through Letchworth State Park is designated as a Scenic River by the State of New York under its Wild, Scenic and Recreational Rivers program and is protected by federal legislation, the Genesee River Protection Act of 1989, which permanently gives the river the same protection as if it were designated as a Study River under the federal Wild and Scenic Rivers program. The Portageville Bridge is located less than 50 feet south of the first of three major waterfalls in the park—the Upper Falls.

Letchworth State Park is also listed on the State and National Registers of Historic Places, with 338 elements that contribute to the park's historic significance, ranging from prehistoric

archaeological sites through rustic park structures dating to the early 20th century. The railroad bridge is one of the contributing elements to this designation.

The bridge spans over a park road and trails that line the Genesee River, and the approach tracks pass through wooded areas of the park on either side of the Genesee River. To the west of the bridge, the tracks cross a small stream, and a small wetland area has been identified south of the existing alignment.

The physical location of the bridge within the boundaries of Letchworth State Park complicates options for its replacement and ongoing use. Options to replace the bridge must consider the scenic, natural, and recreational features of the park, the Genesee River, and areas in close proximity to the park.

2.4.5 Economics of Freight Movement

Freight rail is critical to the New York State economy, bringing goods into New York State to serve its consumers, and exporting the products of New York to consumers elsewhere in North America. New York's geography makes it a key link in freight movement between the United States and Canada as well as between Midwestern hubs (i.e., Chicago and Cleveland) and the eastern seaboard.

In 2005, nearly 24 percent (\$63.2 billion) of US imports from Canada and nearly 23 percent (\$44.3 billion) of U.S. exports to Canada were made by way of New York State. Some 60 percent of the imports and 73 percent of the exports crossed the border at Buffalo/Niagara Falls. Freight railroads carried more than 16 percent of these imports and nearly 5 percent of exports.

The Niagara Frontier urban area freight transportation study estimates a dramatic increase in freight movement through the Buffalo/Niagara Falls area by 2035. From 2004 to 2035, freight movement will increase from 47 million to 93 million tons, and cross-border traffic is projected to triple from 6.4 million to 18.2 million tons.

As stated in the New York State Rail Plan, highway lane miles have remained relatively constant over the past 20 years while traffic volumes have increased dramatically. As a result, highway congestion is on the rise. To maintain efficient and economical transport of goods, producers have become increasingly reliant on the nation's railroads for shipping, a trend that is likely to accelerate with increased demand for goods movement.

Routes operated by Class I railroads are critical to New York State's rail freight infrastructure. CSX Transportation's Empire Corridor and Norfolk Southern's Southern Tier route are the longest Class I railroad routes in the state and are the primary links to the border crossing at Buffalo/Niagara Falls and points south and east. The CSX route travels nearly the length of the state between Buffalo and Albany and then turns south toward New York City. However, the Southern Tier route is more direct, traveling a much shorter distance between Buffalo and New York City. Further, the Southern Tier route serves destinations not served by the CSX route, and provides interchange to 11 short line railroads. In addition to regional and national services, the route serves communities and industries in western and southern New York and northern and eastern Pennsylvania.

Recognizing the importance of the Southern Tier route to New York State's and the nation's rail infrastructure, Norfolk Southern has invested substantially in the corridor. Since 1999, Norfolk Southern has made substantial expenditures to upgrade three freight rail bridge crossings and has repaired and replaced infrastructure as needed along the Southern Tier route to meet the modern industry standards for Class I rail freight operations. Norfolk Southern continues to keep the Southern Tier route in a state of good repair. However, the Portageville Bridge is a recognized bottleneck to the area served by freight operations over the bridge, and its current condition threatens the long-term viability of those operations along this critical rail corridor.

2.4.6 Project Goals

With consideration of the deficiencies and engineering considerations described above, Norfolk Southern pursued a project to replace the existing bridge. In its investigation of options to replace the Portageville Bridge, Norfolk Southern identified the following four goals for the Project:

- 1) Eliminate operational constraints along the Southern Tier route caused by the existing Portageville Bridge;
- 2) Reduce the need for extensive ongoing maintenance and related costs of this crossing;
- 3) Optimize existing infrastructure at this location and planned improvements to the Southern Tier route as part of Norfolk Southern's overall operational strategy in New York and in this region of the country; and
- 4) Address the potential for trespassing on the Portageville Bridge by Letchworth State Park patrons.

2.5 PROJECT PURPOSE AND NEED AND OBJECTIVES

The purpose of the Project is to address the existing deficiencies at the Portageville Bridge by providing a modern rail crossing of the Genesee River, at its current location, that is capable of carrying current industry standard freight rail loads, to the greatest degree possible meeting FRA Class 4 speeds, while reducing ongoing maintenance efforts and costs. The Project is needed for Norfolk Southern to continue to provide safe, reliable, and efficient rail operations on the Southern Tier route. These operations are critical to the economic viability and growth of the Southern Tier and other affected areas of New York.

In support of the Project's purpose and need, Norfolk Southern, NYSDOT, and FHWA have identified the following objectives for the Portageville Bridge Project:

- 1) Eliminate the structural deficiencies of the existing Portageville Bridge;
- 2) Address operational constraints along the Southern Tier route caused by the existing bridge; and
- 3) Reduce the need for extensive ongoing maintenance costs related to the existing bridge.

The purpose, need, and objectives are the basis to determine the range of alternatives that have been developed and evaluated for the Portageville Bridge Project. The alternatives are described in Chapter 3, "Project Alternatives."